

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A membrane-electrode assembly comprising~~[[:]]~~ electrodes and an electrolyte membrane.

wherein the electrode electrodes consisting of include (i) a anode comprising a gas diffusion layer and a catalyst material-containing active layer, and (ii) an cathode comprising a gas diffusion layer and a catalyst material-containing active layer, wherein the active layers of the anode and the cathode are formed on the gas diffusion layers of the anode and cathode, in which a viscosity of the active layers of the anode and cathode is in a range of 100 to 10,000 cPs;
[[and]]

~~[[an]] the electrolyte membrane interposed between the anode and the cathode and comprising comprises~~ a catalyst material-containing active layer at one or both sides, ~~the electrodes being hot-pressed to the electrolyte membrane, wherein the viscosity of the active layer in coating the active layer on the gas diffusion layer is in a range of 100 to 10,000 cPs; and~~
the electrolyte membrane is interposed between the anode and the cathode.

2. (Currently Amended) The membrane-electrode assembly of Claim 1, wherein the viscosity of the active layer layers of the anode and cathode in coating the active layer on the gas diffusion layer is in a range of 1,000 to 10,000 cPs.

3. (Currently Amended) The membrane-electrode assembly of Claim 1, wherein the ~~catalyst particles forming the active layer of electrode are coated with an electrolyte~~ active layers of the anode an cathode comprise catalyst particles and the catalyst particles are coated with an electrolyte.

4. (Currently Amended) The membrane-electrode assembly of Claim 1, wherein ~~the catalyst coated on a anode side surface of the electrolyte membrane is the same as the catalyst of the active layer in the anode, and the catalyst coated on an cathode side surface of the electrolyte membrane is the same as the catalyst of the active layer in the cathode~~ the electrolyte membrane

further includes an anode-side catalyst material-containing active layer and a cathode-side catalyst material-containing active layer, the anode-side catalyst material-containing active layer includes the same catalyst material as the active layer of the anode, and the cathode-side catalyst material-containing active layer includes the same catalyst material as the active layer of the cathode.

5. (Currently Amended) The membrane-electrode assembly of Claim 1, wherein the ~~active layer layers of the anode and cathode on the gas diffusion layer is coated~~ are formed on the gas diffusion layer layers of the anode and cathode by a curtain coating process.

6. (Currently Amended) The membrane-electrode assembly of Claim 1, wherein the active layer on the electrolyte membrane is ~~coated~~ formed on the electrolyte membrane by a spray coating process at viscosity of less than 10 cPs.

7. (Currently Amended) The membrane-electrode assembly of Claim 1, wherein the amount of the active layer formed on the electrolyte membrane is 1-100% by weight based on the weight of the active ~~layer~~ layers of the anode and cathode formed on the gas diffusion ~~layer~~ layers of the anode and cathode.

8. (Withdrawn) A method for producing a membrane-electrode assembly as set forth in Claim 1, the method comprising the steps of:

(a) forming a catalyst material-containing active layer on the surface of a electrolyte membrane;

(b) forming a catalyst material-containing active layer on the surface of a gas diffusion layer; and

(c) hot-pressing the gas diffusion layer to the electrolyte membrane, wherein the viscosity of the active layer, which is applied on the gas diffusion layer at the step (b), is controlled in a range of 100 to 10,000 cPs.

9. (Withdrawn) The method of Claim 8, wherein, at the step (a), catalyst ink fed by a gas pressure method is coated on the dried electrolyte membrane by a spray process.

10. (Withdrawn) The method of Claim 8, wherein the viscosity of the active layer, which is applied on the electrolyte membrane at the step (a), is less than 10 cPs.

11. (Withdrawn) The method of Claim 9, wherein, at the step (a), the electrolyte membrane is maintained in a dried state by a thermal dryer.

12. (Withdrawn) The method of Claim 8, wherein the step (b) is performed by coating the catalyst with electrolyte powder, mixing the coated catalyst powder with a solvent so as to prepare catalyst ink, and coating the catalyst ink on the gas diffusion layer so as to form the active layer.

13. (Withdrawn) The method of Claim 8, wherein the step (a) is carried out at an operation temperature of 20-100 °C.

14. (Withdrawn) The method of Claim 8, wherein the step (c) is carried out at an operation temperature of 50-200 °C under a pressure of 5-100 kg/cm².

15. (Withdrawn) The method of Claim 8, wherein the step (b) further comprises performing a dry coating process to the gas diffusion layer.

16. (Withdrawn) A membrane-electrode assembly comprising an electrolyte (ionomer)-coated catalyst particles at a catalytic active layer.